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ABSTRACT

This is a handbook intended for use at a 1-day conference for 170 seventh and eighth grade girls, their parents, counselors, and math/science teachers. It is meant to stimulate interest in exploring career options in mathematics and science related areas. Sections included are: (1) "Introduction"; (2) "Conference Objectives"; (3) "Promotion/Recruitment"; (4) "Conference Day Format" (presenting the procedures and handout materials of the 1-day program); (5) "Recommendations--Do's and Don'ts"; (6) "Follow-up Activities" (providing materials for the activities); and (7) "Resources" (listing media and organizations). (YP)

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MATH/SCIENCE CONFERENCE
FOR 7th & 8th GRADE GIRLS

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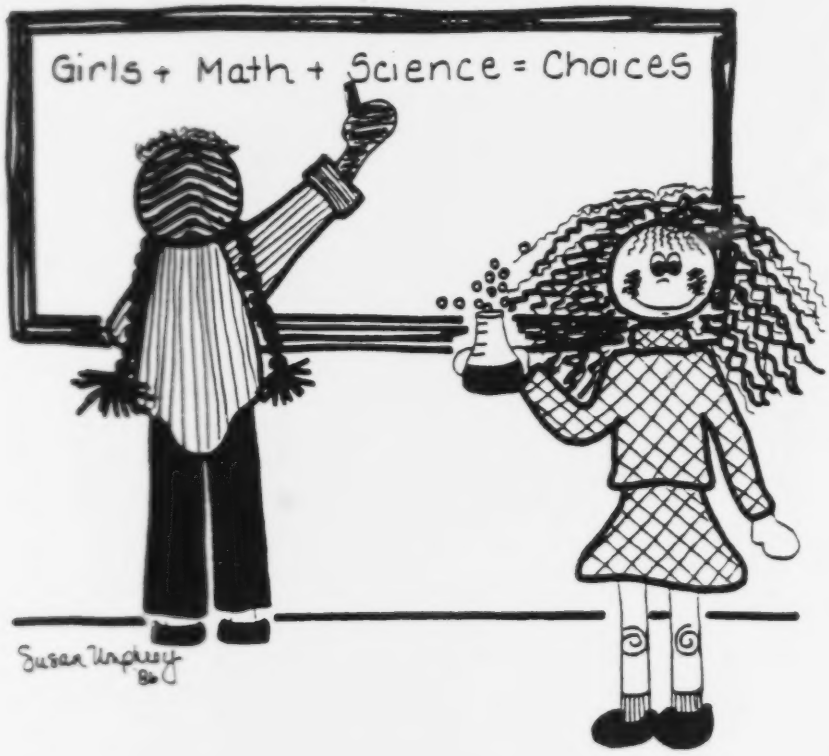

Calhoun Intermediate School District
Marshall, Michigan

HANDBOOK FOR PLANNERS

SE 051 051

BEST COPY AVAILABLE

GIRLS + MATH + SCIENCE = CHOICES

A CONFERENCE FOR YOUNG WOMEN INTERESTED IN EXPLORING CAREER OPTIONS

A Handbook For Planners

By: Rose J. Arbanas, Project Director

Calhoun Intermediate School District
17111 G Drive North
Marshall, Michigan 49068
(616) 781-5141

A 1986 Discretionary Demonstration and Exemplary Grant
Elementary and Secondary Education for Economic Security Act (EESA)
Special Populations: Young Women
Awarded by the Michigan State Board of Education

Third Printing
1988

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Dr. Roger T. LaBonte, Calhoun Intermediate School District Superintendent, for his encouragement and support during the 1985 pilot and 1986 developmental stages.

Warren J. Fudge, former Calhoun Intermediate School District Superintendent, for his leadership in fostering the development of programs directly serving special student populations.

Ann Lauderdale, Barry Intermediate Consultant for G/T, who directed the 1985 pilot conference which assisted us greatly in developing a model for conference planners.

Gayla Lindquist, Project Assistant, who coordinated the work on the Handbook for Parents and Handbook for Educators and brought a fresh perspective to this handbook.

Dr. Ruth A. Snyder, Calhoun Intermediate School District Education Consultant, for her expertise in career exploration and sex-equity projects.

This conference was made possible through the special efforts of counselors from our 20 participating schools. They did an excellent job of coordinating the selection of seventh and eighth grade girls with outstanding talent in math and science areas. The counselors were especially helpful in encouraging parents, math/science teachers and administrators to attend.

PREFACE

Why provide some unique exploration math/science experiences for young women? Because we know that some intense exposure to female role models and career information coupled with effective encouragement from parents, teachers and counselors, can spark the spirit, trigger the imagination and encourage young women to consider many new and exciting career opportunities.

"I'm good at math. I've always hated it, but NOW I know why it is important."

Despite the fact that women have made advances in higher education and science and math-based careers since 1970, much remains unchanged. Females are still severely under-represented in advanced math and science classes at all educational levels. Research on academically talented youth shows the attrition rate among females, known to have high math and/or science abilities far exceeds that of males as soon as mathematics and science courses become optional.

"It's given me a 'can-do' attitude. The conference made me feel more important about myself."

There is evidence that patterns of socialization in the community, in the schools and among the students themselves suggest that mathematical or scientific competencies are inappropriate for girls.

By focusing attention on women in science and technology and by demonstrating effective strategies, the conference helps stimulate interest and encourages young women to keep all their options open so they won't limit their future career choices.

We hope you will find this handbook useful in planning your own conference for young women. We know that your efforts will be rewarded by the excitement and enthusiasm generated during the conference day and by the broader impact of mobilizing the resources, talent and imagination available in your community.

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"I learned how important women are in the world and how you should follow your dream."

"I'm envious! I did not have an opportunity to attend a conference like this when I was in junior high."

I
Introduction

Conferences can be an effective way to stimulate interest and motivation at a critical time when girls traditionally turn off and often get little encouragement to prepare and keep their options open for possible careers in scientific or technical fields.

Concerns voiced by many:

A. Ms. Elizabeth Giese, Michigan State Director of PEER (Project on Equal Education Rights) spoke about equal education for all in Battle Creek at a meeting of Beta Sigma Phi Sorority on May 24, 1983. She discussed Peer's concern that the State of Michigan will not have enough qualified workers for projected high technology jobs. She said the area where students, particularly girls, fail to prepare themselves most often is mathematics.

   PEER's concern for preparation in mathematics is the result of a study of 113 school districts in Michigan. The study found that only 51 percent of eleventh grade girls and 36 percent of twelfth grade girls take math, compared to 61 percent and 45 percent of the boys in respective grades.

B. Sally Ride, America's first woman in space, said she worried about "sometimes subtle, sometimes not so subtle" discrimination that may be keeping young girls out of the science fields.

C. In its feature article, "America's 100 Brightest Scientists Under 40," Science Digest, December 1984, featured 90 males and 10 females. This represents a ratio of 9:1 males to females.

D. The Calhoun Intermediate School District's Science Olympiad Competition in April 1985 involved 20 area school districts and approximately 450 sixth through twelfth grade participants. A ratio of 3:1 boys to girls in the junior high division and a ratio of 2:1 boys to girls in the high school division was noted.

   Even more revealing was the imbalance of particular types of events boys chose versus those chosen by girls. In the computer problem event, the ratio was 27:1 boys to girls at the junior high level and 19:1 boys to girls at the high school level. Also, in those events that required construction of any sort to solve a scientific problem, the ratio of male participation to female was similar to that found in the computer event.

E. Participants in a Symposium of Women in Science at Stanford University in 1983 concluded that the lack of participation by females in the scientific community is a "tragedy for women and a loss of intellectual power for the nation." They called for more attention to be given to secondary and primary education as well as to the effects of societal differentiation.

Remarks from students who attend math/science conferences indicate that meeting female role models in the scientific fields is very important.

"I was surprised to meet so many happy and successful women."

"It's exposed me to job opportunities I didn't know existed."

II

Conference Objectives

Three General Conference Goals, to develop the idea that:

1. Math and science activities are exciting.
2. Women are working in many fields that rely on math and science.
3. More career options are kept open by continuing in high school mathematics and science classes.

Specific Goals for Target Populations:

A. Help **junior high school girls:**

1) Become aware of the opportunity and options in pursuing careers emphasizing math and science.

2) Understand the increased importance for enrolling in and completing a comprehensive high school academic program in math and science.

3) Identify with female role models working in a variety of interesting fields where math and science are prerequisites.

B. Help **parents:**

1) Create an awareness of the importance of girls pursuing math/science instruction as it relates to future career opportunities and options.

2) Identify ways they can assist and encourage their daughters to enroll in high school math/science courses and to consider adult life styles which emphasize the use of math and science.

C. Help **counselors and teachers:**

1) Become sensitized to the fact that females with high potential are underrepresented in high level course work and careers in math/science.

2) Identify ways through use of regular classroom instruction and guidance activities to assist and encourage a greater number of girls to consider math/science curriculum and future life styles which utilize these skills.

3) Become aware of significant differences in how they interact and encourage girls, in comparison to boys, in fostering the development of math/science talents.

III
Promotion/Recruitment

A. When planning a successful conference, the first step to consider is informing local superintendents of your intent, objectives and outcomes expected for conference participants.

B. Junior high/middle school counselors are your most important resource. At least three months prior to holding a conference, invite counselors to attend an informative meeting regarding the conference. Solicit their suggestions on various aspects of the recruitment, conference day, resource people, site, date, etc.

C. To assist promoting the conference, a 10 minute, one-half inch video tape showing the various conference components is available. (Calhoun Intermediate School District.)

IV
Conference Day Format

The conference will be a one-day program for 170 seventh and eighth grade girls, their parents, counselors and math/science teachers.

The day will include:

1. Combined activities for each of the four groups attending.
2. Specific sessions for each of the individual groups attending.
3. Evaluation of the day.

Specific format:

The first hour will involve registration, refreshments, display tables with handouts that have information for each of the four groups attending and advertisements that include women in scientific and technical roles.

The conference will begin with a keynote presentation. This will be a general session for all four groups. The keynoter should be a female who is active in the science/math career world and knowledgeable in the area of gifted females. The program coordinator and keynoter will set the tone for the conference and address the three general conference goals:

1. Math and science activities are exciting.
2. Women are working in many fields that rely on math and science.
3. More career options are kept open by continuing to take classes in math science.

An open discussion session with the keynoter as the facilitator for parents, counselors and science/math teachers will follow the keynote address. This session is an opportunity for each group to question, voice concern and share ideas regarding the need to encourage girls in developing their math/science talents.

The seventh and eighth grade girls will have an opportunity to attend two or three 30-minute sessions. The presenters will be female role models who are presently preparing for, or working in, a career that requires a science/math background. Presenters might address:

1. How they, at a similiar age, related to science and math.
2. Important events/people in their background that were significant in encouraging them.
3. The academic preparation necessary for their career.
4. What they do on the job. A typical day.
5. Advantages and disadvantages of their chosen careers as related to their personal and professional lives.

Students will spend 45 minutes in a session where a "hands-on" problem-solving activity is involved. Emphasis in the hands-on activity period might be on some sort of construction to solve a problem or draw a conclusion/hypothesis. (Activities involving mechanical and spatial type problems are traditionally avoided by girls in comparison to boys.) The purpose of a hands-on session is to build confidence in this type of competency as well as send a clear message to girls that they need to become involved in all types of problem-solving to better develop their math/science talents.

In order to assure an audience for each role model and hands-on presenter, girls will be assigned to sessions rather than given choices. This assures well-balanced numbers for each session, avoids girls attending sessions just because their friends chose one and provides the greatest exposure to a variety of careers.

Video tapes and films will be shown during the lunch hour for all four groups to view. They should depict a variety of issues and present female role models in the math/science world. Parents will also be given an opportunity to have a "hands-on" experience using a computer.

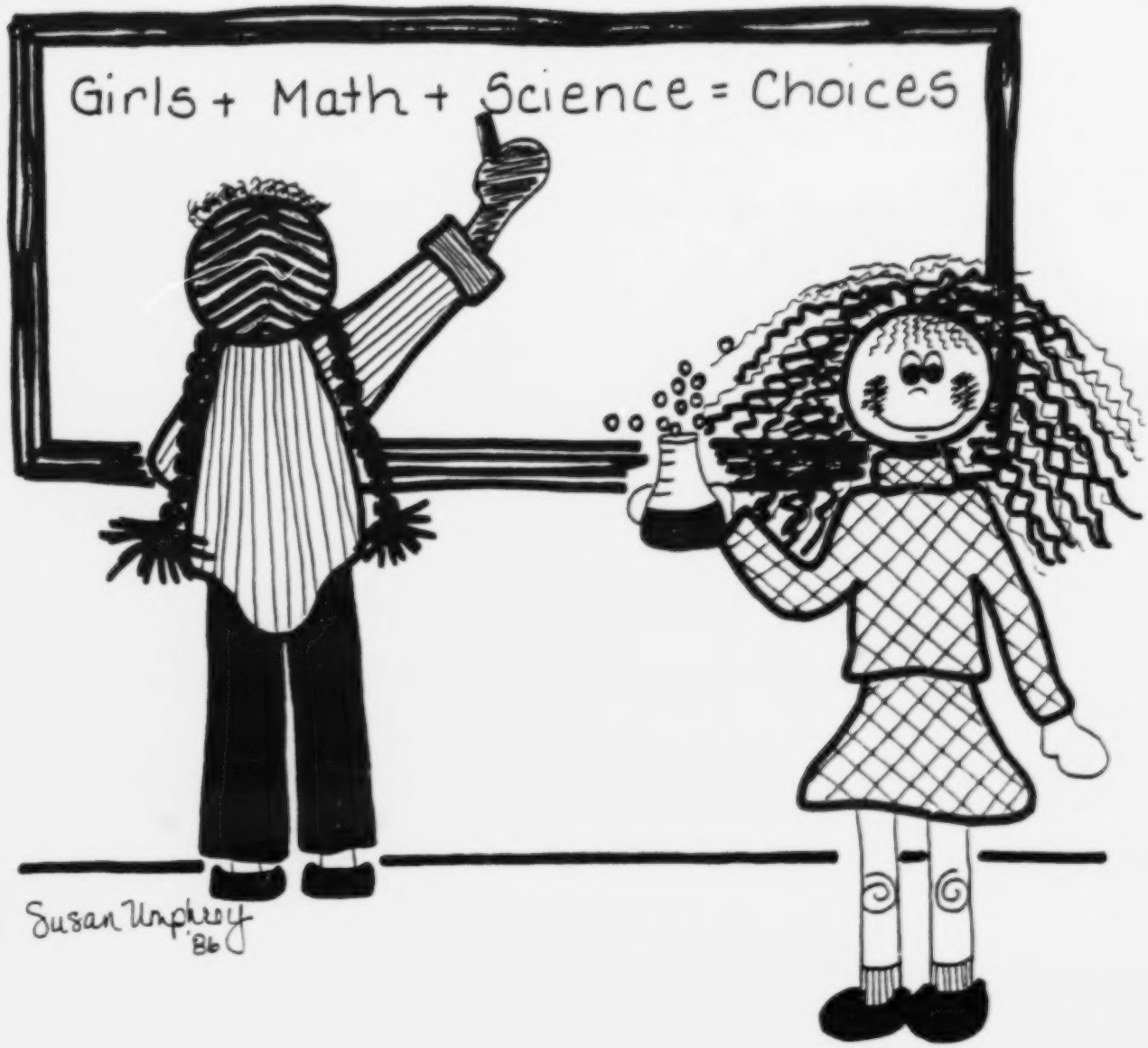
A panel will present in the afternoon for all four groups. The panel will include the female role models working in math/science professional careers who presented to small groups of seventh and eighth grade girls in the morning sessions. At the conclusion of the panel, presenters will be available to girls and parents who may have specific questions for them. *

The conference day will conclude with a wrap-up and evaluation.

Presenters will be encouraged to spend the entire day with the conference to provide as many opportunities as possible for informal interaction with conference participants.

* A key to the success of the panel is a 45 minute meeting with the moderator prior to the panel presentation.

1988
CONFERENCE FOR GIRLS



PRESENTERS: Small Group Session and Panel

Jacqueline S. Allen, M.D.
Kalamazoo

Kolean England
Skilled Machinery Operator
Simpson Industries
Litchfield

Lynne Haley, D.D.S
Marshall

Barbara Lenar, Candidate
Michigan Teacher in Space
Lakeview Junior High School
Battle Creek

Judy Otto, Chemical Analyst
Kellogg Company
Battle Creek

Sandy Schaefer, Product Engineer
Eaton Corporation Proving Ground
Marshall

Gretchen Thiele, Ph.D
Systems Analyst
Kellogg Company
Battle Creek

Marcia Thomas, Plant Manager
Ross Laboratories
Sturgis

Ruth A. Snyder, Ph.D. - Panel Moderator
Educational Consultant
Calhoun Intermediate School District

EDUCATORS: Hands-on Sessions

Judy Burns, Principal
Sturgis - Holy Angel School

Carolyn Calender, Physics & Chemistry
Bellevue H.S.

Sharon Christensen, Assistant Principal
Delton Kellogg M.S.

Carmelia Hawkins, Math
Albion - Washington Gardner J.H.

Marria Crinion, Math
Battle Creek - Lakeview J.H.

Sharon Holcomb, Math
Battle Creek - Lakeview J.H.

FOR PARENTS:

Computers: Tony Blalock, Asst. Professor of Mathematics
Olivet College

Curriculum Planning for College Entrance: Nancy Michiels, Counselor
Bellevue High School

Financial Aid Seminar: Ron Thatcher, Financial Aid Director
Olivet College

Math/Science Conference for 7th and 8th Grade Girls

Saturday, April 16, 1988

SPONSORED BY: BARRY, BRANCH AND CALHOUN INTERMEDIATE SCHOOL DISTRICTS

Hosted by Olivet College

8:30 - 9:00 a.m.	Registration:	Mott Center
9:00 - 9:50 a.m.	Introductions:	Rose J. Arbanas Conference Director
	Welcome:	Yvonne Alcantra V.P. for Enrollment Management Olivet College
	Keynoter:	Dr. Carolyn Callahan University of Virginia

GIRLS

10:00 - 10:20 a.m.	Role Models Session A
10:30 - 10:50 a.m.	Role Models Session B
11:00 - 11:20 a.m.	Role Models Session C
11:30 - 12:15 p.m.	Lunch Session I Hands-on Session I
12:15 - 1:00 p.m.	Lunch Session II Hands-on Session II

PARENTS AND EDUCATORS

10:00 - 11:00 a.m.	Discussion led by Keynoter
11:00 - 11:30 a.m.	Film
11:30 - 12:15 p.m.	Lunch - Session I
	Choice of: Computers for Parents, Curriculum Planning for College Entrance, Financial Aid Seminar
12:15 - 1:00 p.m.	Lunch - Session II
	Choice of: Computers for Parents, Curriculum Planning for College Entrance, Financial Aid Seminar

---

1:15 - 2:15 p.m.	Panel - Female role models who presented in morning sessions (For girls, parents and educators)
2:15 - 2:30 p.m.	Wrap-up and evaluations

PARTICIPATING SCHOOLS

Washington Gardner J.H., Albion
Athens M.S.
Northwestern J.H., Battle Creek
Southeastern J.H., Battle Creek
W.K. Kellogg J.H., Battle Creek
Bellevue M.S.
Bronson M.S.
St. Mary's, Bronson
Legg M.S., Coldwater
Delton Kellogg M.S.
Harper Creek J.H.
Hasting J.H.
Homer M.S.
Lakeview J.H.
Marshall M.S.
Olivet M.S.
Pennfield Dunlap M.S.
Quincy M.S.
Tekonsha J.H.
Union City M.S.

HANDBOOK COMMITTEE MEMBERS

Parent Handbook	
Nancy Dando	Bellevue
Penny Kinter	Marshall
Sheldon Knoespel	Olivet
Arlene Lents	Battle Creek
Dick Sheffer	Pennfield
Carol Sybesma	Athens

Educator Handbook	
Doug Burger	Marshall
Joe Fisher	Bronson
Sharon Ferris	Quincy
Sharon Holcomb	Lakeview
Dennis Massingill	Battle Creek
Linda Smith	Coldwater

Rose J. Arbanas Conference Director, Calhoun Intermediate School District
Gayla Lindquist Editor, Calhoun Intermediate School District

With appreciation to the Guido and Elizabeth Binda Fund of the Greater Battle Creek Foundation for its generous support of today's conference.

BUDGET

Based on:	170	Girls
	175	Parents
	35	Educators
	20	Presenters and conference coordinators
	400	

Keynoter ($500 to $1000)	$1000
Resource People	250
Materials/Supplies	500
Handbooks for Adults	400
Refreshments (rolls, juice)	400
	$2,550

If the conference facility has a cafeteria, participants buy their own lunches while conference coordinators provide morning refreshments.

If lunch needs to be catered, add approximately $3.50 per participant.

FEES PER PARTICIPANT

Girls attending the conference are charged $15.00 each.

It is suggested that each girl pay at least $5.00 to assure a commitment to attend and that schools, if appropriate, pay the additional $10.00 fee.

* The majority of schools choose the above formula.
* A few schools charge the girls the total fee.
* A few schools pay the entire fee.

(Based on need, schools make sure the entire fee is paid for any girl who may not be able to attend if total assistance were not available.)

Parents and educators attending the conference are not charged a fee to attend. (Depending on your resources, you may need to charge a lunch fee for adult participants.)

INITIAL PLANNING MEETING WITH COUNSELORS

MEMORANDUM

TO: Middle School/Junior High School Counselors

FROM:

RE: Meeting on Math/Science Conference for Girls

DATE: January ___, 19____

A one-day conference for Barry, Branch and Calhoun Intermediate School Districts' seventh and eighth grade girls talented in the science/math areas is being planned for Saturday, April ___, 19___ .

The purpose of a conference specifically for young girls will be to provide information on the importance of math and science in their lives. Education, career-related fields and exposure to female role models in such a way as to stimulate interest, enthusiasm and involvement in the sciences will be the primary goal for participants. Conference components will include sessions for parents, science/math teachers, counselors and seventh and eighth grade girls.

We would appreciate your ideas and assistance in planning this conference.
The meeting will be:

WHEN: Friday, January ___, 19 ___

TIME: 9:00 a.m. - 11:30 a.m.

WHERE: Calhoun Educational Service Center

*PLEASE NOTE: The Agenda will include:

1) Discussion of conference plans for seventh and eighth grade girls talented in math/science.
2) Identification of schools interested.
3) Location and date of conference.
4) Suggestions and concerns you have regarding the conference.

For our planning, please return the enclosed form by January ___, 19 ___.

cc: Superintendents
J.H./M.S. Principals

January ___, 19___

MATH/SCIENCE CONFERENCE PLANNING MEETING

9:00 - 11:30 A.M.

_____ I will attend

_____ I will not be able to attend

_____ I am interested in our school participating but cannot attend.

_____
Signature

_____
School District

_____
School Buiding

PLEASE RETURN THIS FORM BY JANUARY 21, TO:

January ____, 19 ____
9:00-11:30 am

AGENDA

Counselors - M.S./J.H.

Meeting - Math/Science Conference
for Seventh and Eighth Grade Girls

1. Purpose of Meeting:
   a. To discuss plans for this year's conference
   b. Identify schools that will participate
   c. Get suggestions and concerns you have regarding the conference

2. Conference details:
   a. Grant received
   b. Conference format
   c. Cost per participant
   d. Location/Date

3. Need your assistance:
   a. Promoting conference
   b. Identifying participants
   c. Suggested procedure for girls to apply
   d. Getting girls ready for conference
   e. Encouraging parents and science/math teachers to participate
   f. Suggestions for female role models
   g. Suggestions for hands-on presenters

4. Time line

5. Pre- and Post-test to be administered to girls

6. Questions or other concerns

MATH/SCIENCE CONFERENCE FOR 7th & 8th GRADE GIRLS

Saturday, April ___, 19___

STUDENT INTEREST SHEET

_____

(School)

_____

(Name)

I would like to participate in this program because _____

_____

_____

_____

_____

If I am invited to be in the program and accept the invitation, I would consider this a commitment that includes participating all day on Saturday, April ___, 19___ .

_____

(Signature)

Two teacher recommendations:

I feel that _____ would benefit from and would
Student's Name
be an excellent participant in the April ___, 19___ Math/Science Conference.

_____

Teacher

_____

Teacher

Student Information Sheet

BARRY/BRANCH/CALHOUN INTERMEDIATE SCHOOL DISTRICTS

MATH/SCIENCE CONFERENCE FOR 7th and 8th GRADE GIRLS

Saturday, April ___, 19 ___

8:30 a.m. - 2:30 p.m.

PLEASE PRINT:

STUDENT _____

HOME ADDRESS _____

CITY & ZIP _____ HOME PHONE _____

SCHOOL _____ GRADE _____

PARENTS

I will provide transportation for my daughter to attend.

_____ Yes _____ No

* A very important part of this conference is planned especially for parents. If possible, we strongly urge both mothers and fathers to participate the entire day along with their daughters.

Parent(s) who will be attending: _____
(Print) Parent Name

☐ Parents will not be able to attend _____
(Print) Parent Name

_____
Parent Signature

Return this form by _____ *to:* _____

$_____ Cost Per Each Student. $_____ Cost Per Adult

Make checks payable to: _____

Conference Goals

To develop an awarness of the range of career opportunities in math/science and related fields.

To increase young women's interest in mathematics and science.

Students

Meet with women in math/science related fields, discover a variety of career options and participate in hands-on workshops.

Parents

Special workshops have been planned for parents and other interested adults accompanying students.

Math/Science Conference for 7th & 8th Grade Girls

April____, 19 ____

PROPOSED STUDENT SELECTION CRITERIA AND PROCEDURES

Kind of Student Best Suited For This Program

Students choosing to participate in this project should be evaluated on their ability to: work well independently; think abstractly; be highly motivated, task oriented and inquisitive; and actively participate in problem-solving, critical thinking and discussion activities.

Proposed Selection Criteria

Each student should be considered in at least two categories of criteria: TEST DATA and TEACHER NOMINATION. High scores and strong nominations should be considered.

Test Data

1. Intelligence tests
2. Achievement tests
3. Specific Ability Areas (science, math)

Teacher Nomination

1. Specific ability areas (high interest or ability in science/math)
2. Rating scale (assessments of motivation, creativity, leadership and learning characteristics)

Proposed Selection Committee

It is suggested each district form a selection committee perhaps composed of the principal, the school counselor, one or more science/math teachers and parents.

Suggested Guidelines to be Followed in Selecting Students

1. Local district selection committee is formed and identifies criteria and procedures to use in selecting its quota of students. It establishes a time line for completing the procedure. (Suggested completion date no later than March _, 19__.)

2. Selection committee discusses the project and student selection procedures with the instructional staff, asks for nominations and hands out appropriate nomination forms.

3. Teacher nominations are submitted by an appropriate date to the selection committee.

4. Test scores and other agreed-to evaluative data on nominated students are collected by the selection committee.

5. Selection committee reviews data and identifies potential students for the project.

6. Potential students are given information on the project and interviewed to assure their interest and commitment. An interest sheet requesting participation in the project is completed by the student and submitted to the selection committee.

7. Student information sheets, one for each selected student, are submitted to Calhoun Intermediate School District by Monday, March ___, 19___.

8. By March ___, 19__ , a letter of congratulations from CISD project staff is sent to student participants.

MATH/SCIENCE CONFERENCE FOR 7th/8th GRADE GIRLS

_____	_____
DISTRICT	SCHOOL

The following staff will attend **SATURDAY, APRIL ___, 19___** Math/Science Conference for 7th and 8th grade girls:

_____	_____	_____
Name	Position	Grade
_____	_____	_____
_____	_____	_____
_____	_____	_____

Dear Teacher:

Seventh and eighth grade girls in our school are being offered an opportunity to participate in an Intermediate School District all-day conference on Saturday, April ___, 19___. The conference is designed to expose the students to a variety of resource people in science and math related careers.

We are primarily looking at academically talented students in the science and math areas.

Students participating in the project should possess the following characteristics:

1. Scores of 90% or above on math or science subtests on standardized achievement and/or aptitude tests.
2. Grades of "B" or above average in math and/or science classes in the current year.
3. Have demonstrated a high interest in math and/or science i.e., special projects etc.
4. Have deomonstrated academic responsibility i.e., assignments completed on time, etc.
5. Have demonstrated a potential for achievement in math and/or science which you think should be encouraged as a possible career area.

Conference Objectives:

1. To stimulate the participants' interest in mathematics and science.
2. To broaden their awareness of career options.
3. To motivate them to elect higher level math and science courses in high school and college.
4. To provide female role models and possible mentors.

Please think about the students in your classes, and for those few which appear to possess the above characteristics, complete for each the Scale For Rating Behavioral Characteristics of Superior Students. When finished, submit the completed rating scales to our selection committee.

Thank you for your help,

Selection Committee for the
Intermediate School District
Math/Science Conference

Rating Behavioral Characteristics of girls with math/science talent

STUDENTS:	90% or above on standardized tests	Demonstrated high interest	B or above grades	Highly motivated	Creative	Does more than assigned	Could benefit by recognition	Has few outside opportunities for enrichment	Is beginning to hide talent	Consistent outstanding performance

Teacher _____

Class _____

TRI-COUNTY
MATH/SCIENCE CONFERENCE

7th and 8th GRADE GIRLS

April ___, 19___

Total participating school population for 7th and 8th grade: 5,416

169 Participants

Formula: 1 student participant per 32 students - small districts all receive at least 4 slots.

SCHOOL DISTRICT	TOTAL 7th and 8th GRADE STUDENTS	PROGRAM SLOTS ALLOCATED
Albion	337	11
Athens	128	4
Battle Creek: Springfield	139	4
Northwestern	330	10
Southeastern	160	5
W.K. Kellogg	378	12
Bellevue	163	5
Harper Creek	343	11
Homer	155	5
Lakeview	458	14
Marshall	334	10
Olivet	168	5
Pennfield	269	8
Tekonsha	61	4
Union City	164	5
Bronson	169	16
Coldwater	503	7
Quincy	227	7
St. Mary's Bronson	24	4
Delton Kellogg	281	9
Hastings	475	15
		Total 169

Conference Date: Saturday, April ___, 19____
Site: Olivet College

TIME LINE

Math/Science Conference
for Junior High Girls

Jan. 19	Information meeting with counselors
Jan. 29	Inform CISD if you are participating
Mar. 10	Registrations for girls, parents, educators along with pre-test survey due to CISD
Mar. 25	Letters from CISD to girls and their parents (Will include map, conference schedule, etc.)
Apr. 16	Conference
May	Post-test survey

CONFERENCE SURVEYS

GRADE: _____ SCHOOL: _____

7th & 8th Grade Girls Math/Science
PRE-CONFERENCE SURVEY

Please answer the following questions as best you can.

1. My knowledge of how I can use science in my everyday life is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

2. My knowledge of the different kinds of jobs that use science is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

3. My knowledge of how I can use math in my everyday life is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

4. My knowledge of the different kinds of jobs that use math is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

5. Circle the math courses you have taken or are now taking:
   7th grade math 7th grade advanced math 8th grade math
   8th grade advanced math algebra other _____

6. How many of your math and science teachers have been women?

   _____ _____ _____
   6th grade 7th grade 8th grade

7. Have you taken any summer or after-school classes in math, science, shop or computers?
   No_____Yes_____(Please describe)_____
   _____

8. Circle the grades you plan to take math classes:
   a. 9 b. 10 c. 11 d. 12 e. college

9. Circle the grades you plan to take science classes:
   a. 9 b. 10 c. 11 d. 12 e. college

10. Circle the grades you plan to take computer classes:
    a. 9 b. 10 c. 11 d. 12 e. college

11. After high school, what kind of education do you plan?
    a. None b. Don't know c. Junior college d. military
    e. Bachelor's degree f. Advanced degree

12. Have you given thought to your career plans?
    a. None b. Very little c. Some d. A lot

13. Finish this sentence: When I grow up, I think I might like to be a
    1) _____ , or 2) _____, or
    3) _____

14. Circle three of the following that you feel influence your career plans:
    a. Mother b. Father c. Other relative d. Teacher e. Counselor
    f. Friends g. TV/newspaper/radio h. Books i. Myself j. Other

    Put a second circle on the person or thing that has influenced you most.

15. Does your mother do scientific or technical work?
    a. No b. Yes c. Don't know

16. Does your father do scientific work?
    a. No b. Yes c. Don't know

17. How often do you notice women in math or science fields in newspapers, magazines, and text books?
    a. Don't know b. Never c. Sometimes d. Often

18. How often do you notice women on TV in math or science fields?
    a. Don't know b. Never c. Sometimes d. Often

19. Would you hesitate to take a class if you knew that there would be mostly boys in it?
    a. No b. Yes c. Maybe d. Probably not e. Haven't thought about it

THANK YOU FOR FILLING THIS OUT!

GRADE: _____SCHOOL:_____

7th and 8th Grade Girls Math/Science
POST-CONFERENCE SURVEY

Please answer the following questions as best you can.

1. My knowledge of how I can use science in my everyday life is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

2. My knowledge of the different kinds of jobs that use science is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

3. My knowledge of how I can use math in my everyday life is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

4. My knowledge of the different kinds of jobs that use math is:
   a. Very good b. Good c. Fair d. Poor e. Very poor

5. Circle the grades you plan to take math classes:
   a. 9 b. 10 c. 11 d. 12 e. college

6. Circle the grades you plan to take science classes:
   a. 9 b. 10 c. 11 d. 12 e. college

7. Circle the grades you plan to take computer classes:
   a. 9 b. 10 c. 11 d. 12 e. college

8. After high school, what kind of education do you plan?
   a. None b. Don't know c. Junior college d. Military
   e. Bachelor's degree f. Advanced degree

9. Have you given thought to your career plans?
   a. None b. Very little c. Some d. A lot

10. Finish this sentence: When I grow up, I think I might like to be a
    1)_____, or 2)_____, or
    3)_____

11. How often do you notice women in math or science fields in newspapers, magazines, and text books?
    a. Don't know b. Never c. Sometimes d. Often

12. How often do you notice women on TV in math or science fields:
    a. Don't know b. Never c. Sometimes d. Often

13. Would you hesitate to take a class if you knew that there would be mostly boys in it?
    a. No b. Yes c. Maybe d. Probably not e. Haven't thought about it

14. List some things you have noticed in school, the media, your family, etc., that you might not have noticed before attending the April 19th Conference for Girls.

    1)

    2)

    3)

THANK YOU FOR FILLING THIS OUT!

RECRUITMENT OF PRESENTERS

Female Role Models:

Needed: Seven to eight females in a variety of careers which require math/science background. Include careers that may not require a four-year college education and possibly a college student who is majoring in math/science.

All of the women we asked to present for the conference were extremely enthusiastic and supportive of the importance of this type of opportunity for talented young women. They were very willing to volunteer their time and felt that they had a great deal to share regarding their careers, particular obstacles they encountered as women in male dominated fields and the difficulties of balancing career and family.

Each role model presented three 20-minute sessions in the morning and each was a member of the afternoon panel. (The panel was led by a moderator who met with them during lunch session II to get acquainted and rehearse for the panel presentation.)

Hands-on Instructors:

Needed: Four to eight female math/science instructors from a college, high school or junior high faculty. (For our conference we chose to have one male as a hands-on instructor because he had been very supportive and had assisted us in developing the Handbook for Educators.)

* Instructors selected their own activity. We encouraged them to select activities involving construction.

KEYNOTER
CONFIRMATION

January ___, 19___

Dear_____:

I am writing to confirm our recent telephone conversation regarding your keynote presentation at our conference Saturday, April ___, 19___ for seventh and eighth grade girls talented in math/science. The site will be Olivet College. We are also planning on you leading an informal discussion with parents, counselors and science/math teachers following your keynote. You are not scheduled for any specific sessions after the 10:00 a.m. discussion group; however, we hope you will be able to spend the entire day with us.

The enclosed format should give you an idea of how the day looks. The purpose of our conference is to give recognition to our talented seventh and eighth grade girls and to make them more aware of the many options and opportunities available to them in science and math career areas. There will be 170 girls, their parents and educators in attendance for an approximate total of 400 people.

You may want to include some general information in your keynote regarding gifted girls, including some of the research along with an emphasis on under representation in math/science fields and any other ideas you may have to get them thinking.

As discussed, we will pay you a $____stipend, travel, lodging and any other expenses you might incur. I will be in touch in early March regarding your travel and lodging plans.

We are planning to have a super conference and look forward to you being with us.

Sincerely,

Program Director

Enclosure

KEYNOTER
THANK YOU

May ___, 19___

Dear_____:

Thank you so much for the excellent keynote you did at our April ___ conference for girls. The evaluations on the keynote, from both adults and students, were very high. When we get them compiled, I will send you a copy, along with our package of materials for replicating the conference.

The discussion you led also received very high marks. We appreciate you spending the entire day with us and giving students and parents an opportunity to chat with you informally.

Would it be possible to get a copy of your keynote address. Some of the counselors who attended have requested a copy, and the data you discussed would be extremely valuable in raising the level of awareness as we work toward solutions.

Again, thanks so much for setting just the right tone for our most successful student conference to date. I enjoyed having the chance to meet you and hope we have an occasion to work together in the future.

Sincerely,

Program Director

Enclosure

ROLE MODEL
CONFIRMATION

February 3, 19___

Dear_____:

I am writing to confirm our recent conversation regarding you presenting at our Saturday, April ___, conference for seventh and eighth grade girls talented in math and science. We really appreciate your willingness to help us make this an outstanding experience for the girls, their parents, counselors and math/science teachers.

The enclosed format should give you an idea of how the day will run. There will be 170 girls, their parents and educators in attendance for an approximate total of 400 people. The site for the conference will be Olivet College.

I am asking eight women, representing a variety of careers related to math/science, to present three 20 minute small group sessions to approximately 25 of the young girls. The small group sessions will start at 10:00 a.m. with a break in between. You might like to talk about:

1. How you related to math/science at their age.
2. What you do on the job - a typical day.
   (Bring any visual materials or tools that relate to your work.)
3. Academic preparation necessary for your career.
4. Advantages and disadvantages of your work.
5. Balancing family with career.

Along with the 20 minute small group sessions, we are also asking you to be part of a panel with the other seven presenters from 1:15 to 2:15 p.m. The panel will give all the girls, parents and educators an opportunity to hear from each of you. Dr. Ruth Snyder has agreed to be the panel moderator, and she will meet with you during the second lunch session to get acquainted and rehearse. Each member of the panel will have from three to five minutes and then will respond to audience questions. The focus of the panel might include:

1. Describing what you do on the job - briefly.
2. How you chose your career.
3. Specific suggestions for girls to get more information/experience.
4. Identification of the person who most influenced you.
   (a lot for 3 to 5 minutes!)

Prior to the conference, I will send you an equipment request form, map and other important information. Thanks so much for agreeing to help us on April . We are excited about our talented young junior high girls having this opportunity.

Sincerely,

Program Director

Enclosure

ROLE MODEL
ROOM ASSIGNMENT

April ___, 19___

Dear _____:

As promised, I am sending you more information regarding your presentation at our April 19, ___ , girls' math/science conference.

We appreciate your willingness to help make this outstanding experience for all of our participants and hope that you will be able to spend the entire day with us. (See the enclosed format for the conference schedule.)

Your schedule will include:

Room _____ ____	10:00 - 10:20 a.m.	Session with 25 girls.
Room _____	10:30 - 10:50 a.m.	Repeat session
Room _____	11:00 - 11:20 a.m.	Repeat session
	11:30 - 12:15 a.m.	LUNCH
Room _____	12:15 - 1:00 a.m.	Meet with panel moderator Dr. Ruth Snyder

1:15 - 2:15 p.m. Panel - Approximate audience 400 girls, parents and educators.

We hope you will be able to join all presenters immediately following the conference for a social hour at Schuler's. For our information, please return the enclosed form by April ___. I am looking forward to seeing you on April ___ .

Sincerely,

Program Director

Enclosure

Please return in the enclosed envelope by:
April____, 19____

Presenter: _____

Home Phone: _____

Office Phone:_____

To assist us in planning for our Saturday, April 19th girls' math/science conference we would appreciate the following information:

Equipment needs you would like us to provide:

_____

_____

_____

If you need to purchase any items for your activity, please send me your receipts or an itemized statement so our office can reimburse you for any expenses.

We would appreciate having some brief biographical information about you - one or two sentences to assist the person who will be introducting you. (Olivet M.S. participating girls will be doing the introductions in your small group session.)

_____

_____

_____

_____

_____

Thank you

ROLE MODEL
THANK YOU

May__, 19___

Dear_____:

Thank you so much for being a part of our April 19 Girls Math/Science Conference. We especially appreciate the willingness of professionals like you who take the time to share your experience and knowledge with our area's talented young women.

The evaluations from the 400 adults and students who participated were very high. Everyone loved the panel. You did a super job of getting the message across regarding the importance of keeping options open by continuing your math and science courses.

In this morning's Free Press, a freshman girl from the University of Michigan was quoted as saying, "I found out this year that I don't like mathematics. I've always been good at it, but I can't see any application for math." I felt sad that this young woman had not had the opportunity to attend a conference like ours when she was in seventh and eighth grade.

We really appreciate your spending the entire day with our program and had many comments from participants indicating how much they enjoyed having an opportunity to chat with you informally throughout the day.

Again, thank you so much for helping us have our most successful conference of the year. I hope to have a chance to work with you in the future.

Sincerely,

Program Director

MODERATOR
ROOM ASSIGNMENT

TO:

FROM:

RE: Girls Math/Science Conference, Saturday, April ___, 19___.

DATE: April__, 19 ____

Thanks so much for volunteering to be the moderator of our panel discussion at the Girls Math/Science Conference April___, 19___. It is going to be a great conference and we are looking forward to a super experience for all involved.

The enclosed letters were mailed to each presenter who will be on the panel.
You will be meeting with panel members at Olivet College in:

Room 110 from 12:15 to 1:00 p.m.

The panel is scheduled for the auditorium from: 1:15 to 2:15 p.m.

There will be an approximate total of 400 in the audience. This will include girls, parents and educators.

We are planning a social hour at Schuler's immediatley following the conference and hope that you will be able to join us. If you can squeeze in the time, please plan to spend the entire day with us. (See enclosed format.)

Thanks for your help and great support, Ruth.

RA/cw

Enclosures

HANDS-ON
CONFIRMATION AND
ROOM ASSIGNMENT

TO:

FROM:

RE: Hands-On Sessions
Girls Math/Science Conference
Saturday, Apirl ___, 19___

DATE: March ___, 19___

Thanks so much for your willingness to be a part of our April 16th conference for girls.

You are scheduled for _____ session(s).

Session I:	11:30 - 12:15 p.m.	Room: _____
Session II:	12:15 - 1:00 p.m.	Room: _____

You will have approximately 15 girls in each session. They will be from a variety of our participating schools.

The enclosed material should give you some ideas regarding an activity for the 45-minute sessions.

We hope that at the beginning of the hands-on session that you will discuss its purpose with the girls. These sessions are to encourage them to take part and get involved in more activities which call for problem-solving and constructing something to solve a math or science problem. They need to become aware of the fact that girls often choose not to do such activities, and consequently they lack some important skills necessary for many careers they might choose.

We hope you will be able to attend the keynote session and the afternoon panel discussion with us on April 19. If you can take the time, please plan to join us at Schuler's for an informal social hour immediately following the conference.

Again, we appreciate your willingness to help make the conference an outstanding experience for our area schools' talented seventh and eighth grade girls.

For our information, please return the enclosed form to me by April ___, 19___ .

HANDS-ON
THANK YOU

May ____ 19____

Dear Sharon,

Thanks so much for assisting us in our April 16th Girls Math/Science Conference.

The hands-on sessions were a big success and were rated highly by the girls. Without educators like you who were willing to share their expertise, the day would not have been the outstanding success it was.

Again, thank you for all your help in providing such an outstanding experience for so many young, talented seventh and eighth grade girls.

Sincerely,

INFORMATION TO PARENTS AND COUNSELORS

COUNSELORS
THANK YOU

MEMORANDUM

TO: Counselors

FROM:

RE: Girls Math/Science Conference, Saturday, April __, 19 ___

DATE: April ___, 19 ___

Thank you so much for your support of the conference for talented math/science girls in your school. Thanks to your efforts, we will have:

20 schools participating
170 seventh and eighth grade girls
184 parents including 66 fathers. 76% of the girls will have one or more parents attending
27 educators

Attached is a copy of the letter sent to students, a map and a schedule for the day. The map and schedule will also be sent to educators in your building who plan to attend the conference.

We are looking forward to an exciting day for all involved.

Enclosures

PARENTS
CONGRATULATIONS AND INFORMATION

April ___, 19___

Dear Parents:

Congratulations on the selection of your daughter as a participant in the Barry, Branch and Calhoun Intermediate School Districts' April __, 19__, conference for seventh and eighth grade girls who are talented in math and science. A format for the day and a map are enclosed.

A number of professional women will be sharing their expertise and enthusiasm with our conference participants. They will be speaking about their work in medicine, banking, ccmputer science, engineering, chemistry and other math/science areas.

We are pleased at the large number of girls, parents and educators who will be attending. There will be approximately 400 participants at the conference.

We ask you to arrive at Olivet College before 9:00 a.m. so that you can register and receive your conference information.

Lunch is being provided for all participants. If you signed-up to attend on your daughter's registration slip, we are planning on you as a participant.

We look forward to an exciting and informative conference for all involved.

Sincerely,

Program Director

STUDENT FOLDERS

Include:

Program

Blank paper

Pencil*

Two 3X5 inch cards**

Any pamphlet handouts

Schedule sheet

Evaluation form

* Pencils quoted the conference theme:
GIRLS + MATH + SCIENCE = CHOICES

** Cards were provided for participants to write questions for panel presenters.

YOUR SCHEDULE

10:00 - 10:20	Session A	Room _____
10:30 - 10:50	Session B	Room _____
11:00 - 11:20	Session C	Room _____
LUNCH	Session _____	
HANDS-ON	Session _____	Room _____

* Girls are assigned to three role model sessions. Approximately 25 girls are assigned to each presenter.

* Hands-on sessions have approximately 15 girls per session.

* The lunch period is split into two sessions. Girls from the same school and adults from those schools are assigned the same schedule.

ADULT FOLDERS

Include:

Program

Blank paper

Pencil

Two 3X5 inch cards

Any pamphlet handouts

Evaluation form

Parent Handbook

Educator Handbook

CONFERENCE SITE

1. A college campus is often an excellent choice, as the location is a neutral one and may not have regular classes going if a Saturday date is selected. The availability of a staffed cafeteria can also be a plus in cutting down conference costs.

2. A participating junior high or middle school might also provide an excellent facility.

   (There may be additional costs to the budget depending on the particular site you select: custodian, etc.)

   You will need:

   a. An auditorium that seats at least 400.

   b. A minimum of eight to 10 classrooms.

   c. Cafeteria facilities.

Plan to have at least two meetings with site staff you will be working with. The first session will be used to check out facilities and establish a contact person. The second session, just prior to the conference, will allow you to make sure all needs are covered.

Be sure to give the contact person a written list of specific needs: Rooms, audio visual equipment, outlets, extension cords, etc.

SITE
THANK YOU

April ___, 19___

Dear_____:

Thank you so much for the super job you did in having things run so smoothly for our April 16 conference. It is such a pleasure to work with someone who follows through so well and gives attention to the small details as well as to the larger ones. Your assistance along with Leslie's was greatly appreciated.

There were a number of comments on the evaluations from both the girls and their parents about Olivet College's fine facilities. Coleen Rose and Joel Peterson did an excellent job of assisting us with all the little details that were so important for a smooth-running day.

Please send the billing for food, student help and any other costs to my attention.

We look forward to working with Olivet College in the future and compliment you and many others on Olivet's staff for providing our program with such an outstanding facility.

Sincerely,

Program Director

OTHER SITE
THANK YOUS

May__, 19___

Dear_____:

Thank you so much for helping us at Olivet College with out April conference for girls.

We appreciate your willingness to work on a Saturday to make sure that everything went smoothly for the 400 people who attended. It takes a lot of people to put on such a conference, and everyone who helped played a big part in making the event one of our most successful conferences to date.

I hope to have a chance to work with you sometime in the future.

Sincerely,

May__, 19___

Dear _____:

Thank you so much for all your help in making our April conference such a success. We appreciate all the assistance and attention to detail you and others at Olivet provided to make sure everything would run smoothly.

Your girls, who did introductions and helped folks feel comfortable, were fun to work with and did a very nice job.

I especially appreciated you sticking around on April 15, to set up for the next day. I enjoyed working with you, David, and again thank you for your many contributions to one of our best conferences of the year.

Sincerely,

EVALUATION

Student Reaction Form _____
Name of School

MATH/SCIENCE CONFERENCE FOR 7th and 8th GRADE GIRLS
SATURDAY, APRIL___, 19__

DIRECTIONS: Please circle the answer which best describes your feelings about your experience at today's conference.

SD = Strongly Disagree
D = Disagree
N = Neutral
A = Agree
SA = Strongly Agree

1. I felt this program was worthwhile for me. SD D N A SA
2. I liked the way the day was organized SD D N A SA
3. I enjoyed the hands-on activities. SD D N A SA
4. The speakers kept my interest. SD D N A SA
5. Please evaluate the sessions you attended.

(Please fill in the names)

		OOPS ... GREAT				
_____ Presenter	Session A	1	2	3	4	5
_____ Presenter	Session B	1	2	3	4	5
_____ Presenter	Session C	1	2	3	4	5
_____ Presenter	Hands-on	1	2	3	4	5
_____ Dr. Carolyn Callahan	Keynote	1	2	3	4	5
_____	Panel	1	2	3	4	5

6. Three benefits I received from particiating in this conference:
   a. _____
   b. _____
   c. _____
7. Suggestions for improving the conference:

ADULT REACTION FORM

☐ Speaker
☐ Educator
☐ Parent

_____
School District Name

MATH/SCIENCE CONFERENCE FOR 7th and 8th GRADE GIRLS
SATURDAY, APRIL__, 19__

DIRECTIONS: Please circle the answer which best describes your feelings about your experience at today's conference.

SD = Strongly Disagree
D = Disagree
N = Neutral
A = Agree
SA = Strongly Agree

1. I felt this program was a worthwhile experience for the students. SD D N A SA
2. I found this program to be a personally rewarding one. SD D N A SA
3. The schedule for the day was about right. SD D N A SA
4. I would recommend the conference to other speakers, educators, parents. SD D N A SA
5. My reactions to the speakers:

	OOPS ... GREAT				
Keynote	1	2	3	4	5
Discussion	1	2	3	4	5
Film	1	2	3	4	5
Session Choice _____ Presenter	1	2	3	4	5
Panel	1	2	3	4	5

6. Three benefits I received from participating in this conference:
   a. _____
   b. _____
   c. _____
7. Suggestions for improving the conference:

V

Recommendations

DO'S OF THE CONFERENCE

1. Have a committee at each school to assist you in identifying girls to participate.

2. Involve the math/science teachers in identifying a talent pool of girls who might benefit from participating. Look beyond the all "A" students and high-scorers on standardized tests. Include minority students, and look carefully at underachieving gifted girls.

3. Call together the girls in your talent pool. Discuss the conference, and invite them to apply. When you have quotas, this procedure gives recognition to more girls than might be able to attend.

4. Assume you will need to discuss appropriate behavior at a conference as this will be a new experience for the girls.

5. Emphasize the importance of the girls having **both** parents attend. Discuss the activities that will be specifically geared to parents and the value of having them attend for the entire day.

6. Assign no more than four girls from a particular school to each session. Seventh and eighth grade girls love to chat with friends. Assign at least two girls from the same school to each session, however, as this age girl can also be very insecure.

DON'TS OF THE CONFERENCE

1. Don't forget to spend a few minutes of time during the opening session to explain your rationale for assigning girls to sessions rather than giving them choices. The rationale is based on the importance of:

   a. Making sure each professional volunteering time will have an audience.

   b. Giving girls exposure to career fields they may not already have an interest in. It expands their horizons.

   c. Exposing girls from each participating school to a variety of presenters so they can share information from many presenters with each other.

2. When quotas are used, avoid having girls attend the conference two years in a row. Attending more than once might be a valuable experience; however, try to provide this opportunity for as many girls as possible from each participating school.

3. Don't forget to contact your local newspapers and TV stations to get coverage for the conference. (This should be done at least three weeks prior to the event.)

VI

Follow-Up Activities

1. Have girls who attend the conference plan ways to share what they learned with others at their school.

2. Distribute handbooks for educators and parents to people in your school who may not have had an opportunity to attend the conference.

3. Make the 10 minute video tape on the conference available to your building staff and also to high school staff. Encourage them to use the tape as part of their instruction with all students.

4. Provide in-service for math/science educators in your district to create an awareness of how teacher and parent behavior is a key to assisting females in seeing themselves in future scientific and technical fields. Include activities on sex equity.

5. Meet with high school girls who participated in the conference as a seventh or eighth grader. Conduct a follow-up survey and in-service regarding the importance of math/science in keeping options open.

H.S. COUNSELOR
INFORMATION FOR
DOING A FOLLOW–UP SURVEY

MEMORANDUM

TO: High School Counselors

FROM:

RE: **Girls Math/Science Conference Follow-up**

DATE: April ___, 19 __

I am in the process of organizing a follow-up study related to our annual Junior High Girls Math/Science Conference which is designed to encourage girls with math/science abilities to pursue their development in these areas. I am attempting to locate girls who participated in our 1985, '86 or '87 Math/Science Conference.

The enclosed list identifies those girls whom I believe are in your school. Could you please assist me with distributing information to them? In addition, please include, if you can, any girls in your school who attended the math/science conference while in junior high but whose names are missing from this list.

Initially, I would like your assistance in setting a one-hour time during the period from April 25 - May 20 which I could use to meet with these girls at your school. I have included a schedule for meeting with you and indentified girls. Please check your calendar, and return the enclosed yellow form to me by April___, 19___.

I will be explaining a conference follow-up survey at the meeting. Since the survey requires a control group composed of girls who did not attend the conferece, I am asking that each girl select, and be allowed to bring to the meeting, another female classmate with equivalent math/science potential. This person must not have attended any of our Junior High Math/Science Conferences. I am enclosing forms which can be completed with meeting information and distributed to each girl.

Your help with this project is greatly appreciated, and I look forward to hearing from you about our proposed meeting.

RJA:rw

Enclosures

cc:High School Principals

SCHEDULE FOR MEETING
WITH
H.S. GIRLS WHO PARTICIPATED IN THE CISD
MATH/SCIENCE CONFERENCE WHILE IN 7TH and 8TH GRADE

Union City	Friday -	April 29th	-1st a.m. period
Tekonsha		April 29th	-3rd a.m. period
Homer		April 29th	-1st p.m. period
Lakeview	Wednesday -	May 4th	-1st a.m. period
B.C. Central		May 4th	-3rd a.m. period
Athens		May 4th	-2nd p.m. period
Bronson	Tuesday -	May 10th	-1st a.m. period
Coldwater		May 10th	-3rd a.m. period
Quincy		May 10th	-1st p.m. period
Harper Creek	Wednesday -	May 11th	-1st a.m. period
Pennfield		May 11th	-3rd a.m. period
Springfield		May 11th	-1st p.m. period
Delton Kellogg	Thursday -	May 12th	-2nd a.m. period
Hastings		May 12th	-1st p.m. period
Bellevue	Tuesday	May 17th	-2nd a.m. period
Olivet		May 17th	-1st p.m. period
Albion	Wednesday -	May 18th	-2nd a.m. period
Marshall	Thursday -	May 19th	-2nd a.m. period

* The above is a tentative schedule. If you indicate on the enclosed yellow sheet that the time I have scheduled for you will not work, please contact me to set another time.

CONFIRMATION FOR MEETING WITH HIGH SCHOOL GIRLS

Please return this form by **Wednesday, April 20,** to confirm the date and time for meeting with girls in your high school.

The date and period listed on the enclosed schedule will work for our school.

_____ Yes

_____
Date

_____
Exact time you can meet with girls at our school.

_____No, I will contact you to set another time.

_____
Signature

_____
School

Return to :

Junior High Girls Math/Science Conference
Follow-Up Meeting

_____
(Name)

_____
(School)

_____
(Grade)

_____ _____ _____
(Meeting Date) (Time) (Place)

Because you attended either the 1985, '86 or '87,Junior High Girls Math/Science Conference organized by the Calhoun Intermediate School District, you are being asked to attend a meeting to assist with a follow-up study. The date, time and place are listed above.

To assist with the study, please bring a female classmate with abilitiy similiar to your own in the fields of math and science. The only other requirement is that she NOT have attended one of these Math/Science Conferences.

I am looking forward to seeing you again at our meeting. Please complete this form, and bring it with you to the meeting. Your help is greatly appreciated.

Rose J. Arbanas
Math/Science Conference Director

I will bring _____ , _____ .
(Name of Guest) (Grade)

I agree that the above named girl has comparable math/science ability to the student presenting this form.

_____
(Math or Science Teacher)

_____
(Name)

_____
(Grade)

You are invited to help with a follow-up study being conducted in relation to the 1985, '86 and '87 Junior High Girls Math/Science Conference organized by Calhoun Intermediate School District. Your input will be helpful because our records indicate that you did NOT attend any of these conferences.

Please bring this sheet with you to our meeting on _____
(Date)

at _____ in _____.
(Time) (Place)

Your help is greatly appreciated.

Sincerely,

Girls Math/Science Conference Director

Grade_____ School _____

I attended the Math/Science Conference for Girls

19 ____ 19 ____ 19 ____

HIGH SCHOOL FOLLOW—UP SURVEY
For Participants in J.H. Math/Science Conference for Girls

Please answer the following questions:

1. My knowledge of the different kinds of jobs that use science is:

   a. very good b. good c. fair d. poor e. very poor

2. My knowledge of the different kinds of jobs that use mathematics is:

   a. very good b. good c. fair d. poor e. very poor

3. What mathematics classes have you taken in high school? (If you have not completed a grade listed, fill in the classes you plan to take.)

   9th grade _____ _____

   10th grade _____ _____

   11th grade _____ _____

   12th grade _____ _____

4. What science classes have you taken in high school? (If you have not completed a grade listed, fill in the classes you plan to take.)

   9th grade _____ _____

   10th grade _____ _____

   11th grade _____ _____

   12th grade _____ _____

5. What computer classes have you taken in high school? (If you have not completed a grade listed, fill in the classes you plan to take.)

   9th grade _____ _____

   10th grade _____ _____

   11th grade _____ _____

   12th grade _____ _____

6. Do you have a computer at home? _____ yes _____ no

7. **Have you taken, or are you now taking, accelerated or advanced placement math or science classes?**

_____ yes_____ no If yes, list the titles of the classes:

_____ _____ _____

8. What are your educational plans after high school?

a. none
b. don't know
c. vocational training
d. military
e. community college
f. bachelor's degree
g. advanced degree

9. How much thought have you given to your career plans?

a. none b. very little c. some d. a lot

10. What kinds of activities have you participated in to find out more about career interests you have?

_____

_____

_____

11. Name as many famous women as you can who have, or had, careers requiring math and science backgrounds:

_____ _____

_____ _____

_____ _____

12. Name as many famous men as you can who have, or had, careers requiring math and science backgrounds.

_____ _____

_____ _____

_____ _____

13. Do you personally know any women (mother, relative, friend of family, neighbor) who have careers requiring a math/science background?

_____yes_____ no List, along with occupation:

Name	Occupation
_____	_____
_____	_____
_____	_____

14. Do you personally know any men (father, relative, friend of family, neighbor) who have careers requiring a math/science background?

_____yes_____ no List, along with occupation:

Name	Occupation
_____	_____
_____	_____
_____	_____

15. Do you look for representation of women and minorities in your textbooks, advertisements, school bulletin boards and TV in nontraditional roles?

_____ yes _____ no _____sometimes

16. Would you be comfortable in a class if you were the only female?

_____yes _____ no _____ maybe _____ don't know

Comment: _____

_____

17. For each of the following statements, tell if you agree, disagree, or are undecided:

a. Studying science and mathematics is just as important for women as for men.
   a. agree b. disagree c. undecided

b. Mathematics will be important to me when I get out of high school.
   a. agree b. disagree c. undecided

c. I would have more faith in the answer for math problem solved by a man than by a woman.
   a. agree b. disagree c. undecided

d. I would like to know more about jobs in science, mathematics or engineering field.
   a. agree b. disagree c. undecided

e. I would like to visit a scientist at work.
   a. agree b. disagree c. undecided

f. My teachers expect me to do well in math/science.
   a. agree b. disagree c. undecided

g. Math and science classes are important for most of the college majors I might choose.
   a. agree b. disagree c. undecided

h. My teachers seem to encourage and call on boys more frequently than they do girls in my classes.
   a. agree b. disagree c. undecided

18. Do you feel your participation in the Junior High Math/Science Conference has made a difference in your participation and attitudes toward school, your career goals, etc.?

    a. yes b. no c. not sure

    Please explain:

    _____

    _____

19. Did your parents attend the Junior High Math/Science Conference with you?

    yes _____ no _____

    a. Mother attended b. Father attended c. Both attended

    d. Other adult attended with me _____

    * Did their participation make them seem more interested in your participation in math and science?

    yes _____ no _____ not sure _____

20. On a scale of one to ten, with one being low and ten being high, please rate the following:

    1) _____ I like math.

    2) _____ I like science.

    3) _____ I have a lot of ability in mathematics and math-related activities.

    4) _____ I have a lot of ability in science and science-related activities.

    5) _____ My parents are aware of the class choices I make when planning my high school schedule.

    6) _____ My parents actively encourage me to select math and science classes.

    7) _____ My parents often talk to me about my career plans.

    8) _____ My high school counselor has encouraged me to select math and science classes.

    9) _____ My high school math and science teachers encourage me to succeed in their classes.

21. What do you see yourself doing seven years after high school?

* Change the heading and omit questions 18 and 19 if you have a control group survey.

VII
Resources

Media (Used with adults at conference)

1) When I Grow Up - 18 min. film. It shows clear differences very early in career aspirations of boys versus girls. Also depicts differences in expectations of adults for boys versus girls. (MTI Teleprograms Inc., 4825 N. Scott St., Schiller Park, IL 60176)

2) Making Points - 10 min. film. A very "pointed" film about sex stereotyping in our society. It features junior high age boys in role reversal. (Direct Cinema Limited Library, 445 West Main St., Wyckofs, NJ 07481)

3) Science: Women's Work - 25 min., ½" video tape. It shows a number of successful women working in scientific and technical fields. (National Audiovisual Center, 8700 Edgeworth Dr., Capitol Heights, MD 20743-3701)

4) Handbook for Educators - Designed to create awareness of the importance of encouraging females in math/science areas. It includes specific activities for educators. (Calhoun Intermediate School District)

5) Handbook for Parents - Designed to create an awareness of the important role parents have in whether or not their daughters pursue careers in scientific and technical fields. (Calhoun Intermediate School District)

Materials for follow-up activities:

1) Girls + Math + Science = Choices - Ten minute ½" video tape. Depicts the conference activities and includes a strong message of encouragement to talented young women to pursue careers in math/science. (Calhoun Intermediate School District.)

2) Kit to Develop and Present a Math/Science Conference for Females in Middle School - Developed by: Betty Lee Ongley, Counselor, Portage Public Schools. (Office of Sex Equity, Michigan Department of Educators, Box 30008, Lansing MI 48909)

Places To Write

Write to these organizations to receive brochure copies that interest you.

American Chemical Society Career Services
1155 Sixteenth Street, N.W.
Washington, D.C. 20036

- American Chemical Society Dis. of Approved Schools 1984
- Careers as a Chemical Technician
- A Career in Chemical Engineering
- A Career in Analytical Chemistry
- A Career in Biochemistry

American Meteorological Society
45 Balcon Street
Boston, MA 02108

- The Challenge of Meteorology

American Society for Microbiology
1913 Eye Street, N.W.
Washington, D.C. 20006

- Microbiology in Your Future
- American Society for Microbiology Fact Sheet
- Colleges and Universities Creating Degrees in Microbiology

American Statistical Association Careers in Statistics
Suite 640, 806 Fifteenth St., N.W.
Washington, D.C. 20005

- Careers for Women in Mathematics

The Center for Women's Services
Western Michigan University
Kalamazoo, MI 49007

- Women in Science Brochures available on: Psychology, Geology, Economics, Computer Science, Biology, Chemistry

Society of Women Engineers
United Engineering Center
Room 305
345 East 47th Street
New York, NY 10017

- Betsy and Robbie

The American Sociological Association
1722 N. Street, N.W.
Washington, D.C. 20036

- Careers in Sociology

Michigan Dept. of Education
Office for Sex Equity in Education
P. O. Box 30008
Lansing, MI 48909

Excellent materials to promote sex equity in education, available for teachers, K-12 counselors, students.

EQUALS
Lawrence Hall of Science
University of California
Berkeley, CA 94720
(415) 642-1823

Teacher education programs and materials to attract and retain females and minority students in math.

Multiplying Options and Subtracting Bias
225 North Mills Street
University of Wisconsin, Madison
Madison, WI 53706

Excellent series of videotapes and workshop materials on women and mathematics for junior and senior high school students, teachers, counselors, parents; they present the case for keeping options open by continuing in mathematical study.

The Office of Opportunities in Science
American Association for the Advancement of Science
1776 Massachusetts Ave., N.W.
Washington, DC 20036

List of career opportunities in the sciences, reference bibliographies, etc.

The Committee on the Status of Women in Physics
American Physical Society
335 E. 45th Street
New York, NY 10017

Packet of three pamphlets to provide information for counselors, teachers, and students to encourage young women to consider science and engineering careers.

ASETS: Achieving Sex Equity Through Students
Wayne County Intermediate School District
Box 807
Wayne, MI 48184
(313) 467-1427

A student leadership program for encouraging students to explore and train for non-traditional entry to work opportunities. Part of the NETWORK PROJECT.

PEER Project
1112 13th St., N.W.
Washington, DC 20005
(202) 332-7337

Project that works to end school practices, policies, and attitudes that limit children's choices or keep them from learning the skills they will need for tomorrow's world.